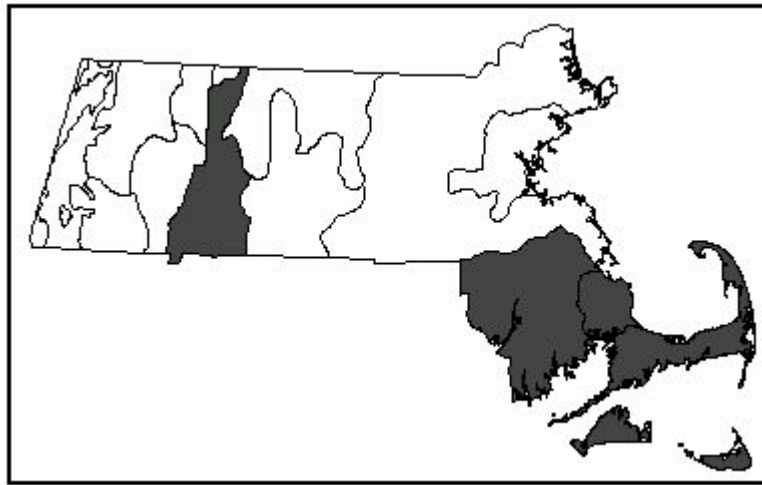


**Community Name:** COASTAL PLAIN PONDShORE  
**Community ELCODE:** CP2A0B1200  
**SRANK:** S2



**Concept:** Herbaceous communities of exposed pondshores, most commonly in southeastern Massachusetts in areas of oak and oak pine forests, characterized by a distinct coastal plain flora.

**Environmental setting:** Shallow, highly acidic groundwater ponds in glacial outwash, usually with no inlet or outlet. Water rises and falls with changes in the water table, typically leaving an exposed shoreline in late summer. In wet years, the pondshore may remain inundated. Substrate varies from sand - cobble to muck.

**Vegetation Description:** Vegetation zonation is correlated with flooding regime. A characteristic zonation pattern from dry to waterline, is as follows: 1. upland oak forest, 2. Shrub border dominated by highbush blueberry (*Vaccinium corymbosum*) associated with sweet pepperbush (*Clethra alnifolia*), and green briar (*Smilax rotundifolia*), 3. Emergent exposed pondshore dominated by coastal plain flat-topped goldenrod (*Euthamia tenuifolia*), pondshore rush (*Juncus pelocarpus*), rose coreopsis (*Coreopsis rosea*) and golden pert (*Gratiola aurea*), with beaksedge (*Rhynchospora* spp.), lance-leaf violet (*Viola lanceolata*), and dwarf St. John's-wort (*Hypericum mutilum*), 4. Semipermanently flooded zone characterized by one or more of the following: bayonet rush (*Juncus militaris*), spike-sedge (*Eleocharis* spp.), pipewort (*Eriocaulon aquaticum*), and 5. Hydromorphic rooted vegetation in deeper water including yellow water-lily (*Nuphar variegata*), white water-lily (*Nymphaea odorata*) and Robbins' spike-sedge (*Eleocharis robbinsii*). Not every pond has every zone, and zones vary in width and species composition from year to year. Coastal plain pondshores have an abundance of state-protected and globally restricted rare plants.

**Associations:** USNVC/TNC coastal plain pond associations include plot data from Massachusetts' coastal plain pondshores.

**Habitat values for Associated Fauna:** Coastal plain pondshores and ponds provide habitat for at least 43 rare animal and plant species. Coastal plain pondshores are important habitat for over 45 species of dragonflies and damselflies. They are also important habitat for painted, musk, spotted, snapping, and the federally endangered Plymouth red belly turtles. Larger ponds are used by migrating and wintering waterfowl, including common and hooded mergansers, goldeneye, and bufflehead. Coastal plain ponds support warm-water fish and freshwater mussels. They function as vernal pool habitat when fish are absent.

**Associated rare plants:**

DICHANTHELIUM WRIGHTIANUM	WRIGHT'S PANIC-GRASS	SC
DROSERA FILIFORMIS	THREAD-LEAVED SUNDEW	- WL
ELEOCHARIS MELANOCARPA	BLACK-FRUITED SPIKE-RUSH	- WL
ELEOCHARIS TRICOSTATA	THREE-ANGLED SPIKE-SEDGE	E
EUPATORIUM LEUCOLEPIS VAR NOVAE-ANGLIAE	NEW ENGLAND BONESET	E
FUIRENA PUMILA	UMBRELLA-GRASS	- WL
HYPERICUM ADPRESSUM	CREeping ST. JOHN'S-WORT	T
JUNCUS BIFLORUS	TWO-FLOWERED RUSH	E
LACHNANTHES CAROLIANA	REDROOT	SC
POLYGONUM PURITANORUM	PONDShORE KNOTWEED	SC
RHEXIA MARIANA	MARYLAND MEADOW BEAUTY	E
RHYNCHOSPORA INUNDATA	INUNDATED HORNED-SEDGE	T

From: Swain, P.C. & J.B. Kearsley. 2001. Classification of the Natural Communities of Massachusetts. Version 1.3. Natural Heritage & Endangered Species Program, Division of Fisheries & Wildlife. Westborough, MA.

# Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife

RHYNCHOSPORA NITENS	SHORT-BEAKED BALD-SEDGE	T
RHYNCHOSPORA SCIRPOIDES	LONG-BEAKED BALD-SEDGE	SC
RHYNCHOSPORA TORREYANA	TORREY'S BEAK-SEDGE	E
SABATIA CAMPANULATA	SLENDER MARSH PINK	E
SABATIA KENNEDYANA	PLYMOUTH GENTIAN	SC
SAGITTARIA TERES	TERETE ARROWHEAD	SC
SCLERIA RETICULARIS	RETICULATE NUT-RUSH	- WL
UTRICULARIA BIFLORA	TWO-FLOWERED BLADDERWORT	T

## **Associated rare animals:**

ALASMIDONTA UNDULATA	TRIANGLE FLOATER	SC
AMBYSTOMA LATERALE	BLUE-SPOTTED SALAMANDER	SC
ANAX LONGIPES	COMET DARNER	SC
CLEMMYS GUTTATA	SPOTTED TURTLE	SC
ENALLAGMA LATERALE	NEW ENGLAND BLUET	SC
ENALLAGMA RECURVATUM	PINE BARRENS BLUET	T
FERRISSIA WALKERI	WALKER'S LIMPET	SC
LEPTODEA OCHRACEA	TIDEWATER MUCKET	SC
LIGUMIA NASUTA	EASTERN PONDMUSSEL	SC
PANDION HALIAETUS	OSPREY	- WL
PSEUDEMYIS RUBRIVENTRIS POP 1	RED-BELLIED TURTLE	E
SPONGILLA ASPINOSA	SMOOTH BRANCHED SPONGE	SC

**Examples with Public Access:** Hyannis Ponds, WMA, Barnstable; Myles Standish State Forest, Carver; Nickerson State Park, Brewster.

**Threats:** Multiple threats affect coastal plain pondshore communities. The greatest threat is from over-development of coastal Massachusetts which impacts pondshores directly through housing and recreation and indirectly through water withdrawal. Shrub and tree encroachment threaten pondshore vegetation in areas with heavy water withdrawal.

**Management needs:** Natural hydrology needs to be maintained. Periodic high water prevents tree / shrub encroachment, and seasonal low water is necessary to expose the pondshore. Vehicle use should be prohibited along pondshores.

## **Synonyms**

**USNVC/TNC:** The following USNVC/TNC associations are known to occur in Massachusetts, and are included within the broad category of coastal plain pondshore community. They are listed according to the zones in which they occur. Shrub border (zone 2) includes *Vaccinium corymbosum*/Sphagnum spp. shrubland [CEGL006190] and a typically narrow band of *Calamagrostis canadensis*-*Dichanthelium meridionale* herbaceous vegetation [CEGL006243]. The emergent exposed pondshore (zone 3) is characterized by one or more of the following: *Rhexia virginica*-*Panicum verrucosum* herbaceous vegetation [CEGL006264]; *Rhexia virginica*-*Crotalaria sagittalis* herbaceous vegetation [CEGL006300]; and *Rhynchospora capitellata*-*Sabatia kennedyana* herbaceous vegetation [CEGL006210]. The semipermanently flooded zone (zone 4) has *Lysimachia terrestris*-*Dulichium arundinaceum* herbaceous vegetation [CEGL006035]; *Juncus militaris* herbaceous vegetation [CEGL006345]; *Eleocharis* (obtus, flavescens)-*Eriocaulon aquaticum* herbaceous vegetation [CEGL006261]; and *Eleocharis flavescens*-*Xyris difformis* herbaceous vegetation [CEGL006400]. Open water (zone 5) is common to other ponds in MA and includes *Nuphar lutea* ssp. *advena* herbaceous vegetation [CEGL004324] and *Nymphaea odorata*-*Eleocharis robbinsii* herbaceous vegetation [CEGL006086].

**MA [old name]:** New England coastal plain pondshore [CP1A100000].

**ME:** 2001 - Three-way Sedge - Goldenrod Outwash Plain Pondshore.

**VT:** Not described.

**NH:** Meadow beauty – slender spike-rush spurned panic-grass – one flowered muhly sand plain marsh, Three-way sedge – Small's spike-rush – manna-grass mud flat marsh, and Blunt and olive-brown spike-rush – floating-leaved aquatic mud flat. Coastal plain pondshore.

**NY:** Coastal plain pondshore.

**CT:** Not described?.

**RI:** Coastal plain pond shore.

**Author:** J. Kearsley

**Date:** 7/21/99